CALIFORNIA AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0616 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in California Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2021	MDZXL02.2114	2.194	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Common Rail Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Continuous Trap Oxidizer	Loader, Tractor, Dozer, Material Handler

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
19 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT	--	--	4.0	0.4	0.01	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Part 1-D" adopted October 20, 2005 and last amended October 25, 2012.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed on this 2ND day of July 2020.

Allen Lyons, Chief
Emissions Certification and Compliance Division

DEUTZ
Nonroad CI

Engine Model Summary Template

Attachment page 1 of 1

EO# U-R-013-0616
Date: 05/20/2020

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for Diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesel only)	6.Torque @ RPM (SAE Gross)	7.Fuel Rate: mm/stroke @ peak torque	8.Fuel Rate: (lbs/hr) @ peak torque	9.Emission Control Device Per SAE J1930
MDZXL02.2114	C5EI55E	TCD2.2L3	74.3@2200	77.9	28.5	206,5@1600	83.9	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI55A	TCD2.2L3	74.3@2600	70.2	30.4	206,5@1600	83.9	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI55D	TCD2.2L3	74,3@2300	76.6	29.3	206,5@1600	83.9	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI50A	TCD2.2L3	67,0@2600	64.7	28.0	184,3@1600	74.4	19.8	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI50D	TCD2.2L3	67,0@2300	68.9	26.4	184,3@1600	74.4	19.8	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI50E	TCD2.2L3	67,0@2200	71.4	26.1	184,3@1600	74.4	19.8	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI45A	TCD2.2L3	60,3@2600	59.2	25.6	184,3@1600	74.4	19.8	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI45DL	TCD2.2L3	60,3@2300	61.2	23.4	154,8@1600	64	17.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI45D	TCD2.2L3	60,3@2300	61.2	23.4	184,3@1600	74.4	19.8	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI36A	TCD2.2L3	48,8@2600	50	19.1	132,7@1600	55	14.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI36D	TCD2.2L3	48,8@2300	52	19.9	132,7@1600	55	14.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5EI36E	TCD2.2L3	48,8@2200	53.5	19.6	132,7@1600	55	14.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5ET55AT	TCD2.2L3	74.3@2600	70.2	30.4	206,5@1600	83.9	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5ET50AT	TCD2.2L3	67,0@2600	64.7	28.0	206,5@1600	83.9	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5ET45AT	TCD2.2L3	60,3@2600	59.2	25.6	206,5@1600	83.9	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5ET55AH	TCD2.2L3	74.3@2600	70.2	30.4	206,5@1600	83.9	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5ET50AH	TCD2.2L3	67,0@2600	64.7	28.0	206,5@1600	83.9	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.2114	C5ET45AH	TCD2.2L4	60,3@2600	59.2	25.6	206,5@1600	83.9	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX